Application for Certification as an Eligible Energy Resource Under the Delaware Renewable Energy Portfolio Standard

1. Name of Generation Unit[1]
   Saponaro Residence

2. Generation Unit Address
   88 Munro Road
   Newark, DE 19711

   2a. Is the Generation Unit located within the PJM control area?
   ☑ Yes ☐ No

   2b. If No, does the Generation Unit have capabilities to be imported into PJM?[2][3]
   ☐ Yes ☐ No

   2b1. Include NERC Tags (if Applicable; Other documentation may be required)_____

3. Name of Owner
   Matthew Saponaro
   Mailing Address
   88 Munro Road
   Newark, DE 19711

   Phone 302-494-6952 Email mattsap@ainhoo.com

   ☑ Same as Contact Person

[1] 26 Del. C. §352(11).
[2] 26 Del. C. §352 (6).
[3] Documentation will be required to substantiate import capabilities into PJM.

4. Name of Contact Person

Matthew Saponaro

Mailing Address

88 Munro Road
Newark, DE 19711

Phone 302-494-6952 Email Mattsap@aiWhoo.com

5. Operational Characteristics: [4]

Fuel Types Used (check all that apply):

☐ Gas combustion from the anaerobic digestion of organic material

☐ Geothermal

☐ Ocean, wave or tidal actions, currents, or thermal differences

☐ Biomass

☐ Fuel Cells

☐ Hydroelectric

☐ Methane Gas captured from a landfill gas recovery system

☑ Solar

☐ Wind

*If co-firing with fossil fuels, attach the allocation formula on file with PJM; co-fire start date_____

*If multiple fuel types are utilized, attach the formula for computing the portion of output per fuel type

5a. **Rated Capacity (in MW, not including battery storage)**[5] 0.005525

5b. **Generation Unit's Final Approved Interconnection Date** 8-9-19

[4] 26 Del. C. §352(6).
[5] Behind the meter Solar capacity should be entered in MW DC.

6. Is the Applicant's Generation Unit customer-sited generation? [6]

☑ Yes ☐ No

6a. Is the meter that measures generation a revenue grade meter?

☑ Yes ☐ No

7. Is the Applicant's Generation Unit a community owned generating facility? [7]

☐ Yes ☑ No

8. Does the Applicant's Generation Unit have battery storage?

☐ Yes ☑ No

If Yes, please answer a.-c.

8a. Can the Generation Unit's renewable energy generation be metered prior to any battery storage?

☐ Yes ☐ No

8b. What is the battery energy capacity in kWh?_____

8c. What is the battery charge/discharge rating in kW AC?_____

9. If the Applicant's installation is solar or wind sited in Delaware:

9a. Was the Generation Unit physically constructed or installed with a workforce that consists of at least 75% Delaware residents?

☑ Yes[8] ☐ No

9b. Does the installing company employ, in total, a minimum of 75% workers who are Delaware residents?

☐ Yes[8] ☐ No

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[6] 26 Del. C. §352(4) - "Customer-sited Generation" means a generating unit that is interconnected on the end use customer's side of the retail electricity meter in such a manner that it displaces all or part of the metered consumption of the end-use customer.

[7] 26 Del. C. §1001(5) - "Community-owned Energy Generating Generation Unit" means a renewable energy generating Generation Unit that has multiple owners or customers who share the output of the generator, which may be located either as a stand-alone Generation Unit or behind the meter of a participating owner or customer. The Generation Unit shall be interconnected to the distribution system and operated in parallel with an electric distribution company's transmission and distribution facilities.

[8] If Yes, please attach supporting documentation (see page 6 for details). Please note, in order to qualify for the Labor/Workforce Bonus, at least one of the options (a. or b.) must be met.

KW Solar Solutions
Company Name of Installer

Dale E. Wolf
Signature of Company Representative

2444 Denny Rd
Bear, DE 19701
Address

Dale E. Wolf
Print Name of Company Representative

10. If the Applicant's installation is solar or wind sited in Delaware, is a minimum of 50% of the cost of the renewable energy equipment, inclusive of mounting components, manufactured in Delaware?

☐Yes* ☑ No

Company Name of Installer

Signature of Company Representative

Address

Print Name of Company Representative

Address

***If Yes, please attach the following documentation:**

- A copy of the supplier's invoice showing Delaware manufactured equipment with this facility identified
    - If the supplier's invoice shows only a coded Purchase Order (PO) number, a copy of the company's matching PO that includes the address where the materials were used/installed, must also be supplied
    - If using a master invoice, a record of the draws against the purchased quantity, on the master invoice, must show the address of each use and the quantity of material used

I, Dale E. Wolf (print name) hereby certify under penalty of perjury that

1. I have made reasonable inquiry, and the information contained in this Application is true and correct to the best of my knowledge, information and belief.

2. I am authorized to submit and execute this Application and to bind myself and/or my company to the representations contained herein.

3. I /my company agree(s) to comply with and be subject to the jurisdiction of the Public Service Commission of the State of Delaware for any matters arising out of my submission of this Application or the granting of the Application.

4. In the event that any of the information contained in this Application changes pending the consideration of this Application or after the Application is granted, I/my company will amend the Application to provide the Commission with such changed information.

5. I acknowledge that if any of the representations made in this Application or in any amendment thereto are found to be untrue when made, I/the company may be subject to sanctions, including but not limited to monetary fines and/or the revocation of any Certificate granted as a result of the representations made in this Application.

Signature: Dale E. Wolf

Date: 8/12/19

Company Name (if applicable): KW Solar Solutions

Position Title (if applicable): President

Required Documentation:

- If the Generation Unit is customer-sited generation, attach a copy of the utility's **Final Approved Interconnection Agreement.** The Agreement must include Generation Unit Address, Nameplate Capacity, and Interconnection Date.

- A copy of U.S. Department of Energy, Energy Information Administration Form EIA-860, if rated capacity **is >1.0 MW** and a copy of the **Final Approved Interconnection Agreement** including Generation Unit Address, Nameplate Capacity, and Interconnection Date.

Documentation Required for Delaware Labor/Workforce Bonus

10. If the Applicant's installation is solar or wind sited in Delaware:

    a. Was the Generation Unit physically constructed or installed with a workforce that consists of at least 75% Delaware residents?
    b. Does the installing company employ, in total, a minimum of 75% workers who are Delaware residents?

If you answered yes to **"a"**, list all employees used as direct labor (physical construction and installation) for this Generation Unit: (Attach additional sheets if necessary)

If you answered yes to **"b"**, list EVERY employee on the payroll during the period from project start date until project completion date. Projects are considerate complete upon final interconnection approval to operate: (Attach additional sheets if necessary)

KW Solar Solutions

Installation Company Name

Project Start Date:_____ Project Complete Date:_____

Employee Full Name	Home Address City, State Only (As per Tax Withholding)	Social Security Number (Last 2 digits Only)
Dale Wolf	Elkton, MD	96
Rob McGinty	Middletown, DE	47
Brian Lankford	Newark, DE	31
Bob Myers	Newark, DE	51

Total Delaware Resident Employees: 3 **Total Number of Employees:** 4

% of Delaware Residents (Delaware Residents Divided by Total Employees): 75%

Municipality Generator Interconnection Application

Single Meter Application – Part I

☑ **New Application** (Meaning no other generator installed) ☐ **Revised Application** (Meaning existing interconnection to be modified)

A single customer interconnecting to a single meter at a single premise makes a new / revised application this date June 25, 2019 to the Municipality of Newark, to install and operate a generating facility interconnected with the Municipal's electric utility system.

Section 1. Ownership Type:

☑ Customer Owned and Operated ☐ Customer Leased and Operated ☐ Third Party Owned and Operated

Applicant must attach a fully executed contract between the vendor and the applicant. The Municipal Electric Utility has the right to promulgate rules and regulations and while we make best efforts to support our customers desire for net-metering the Municipal Electric Utility retains the right to decline any application that does not meet the requirements of this application, municipal tariff, or technical considerations.

Section 2. Applicant Information: New Construction ☐ (Meaning new home or business) Existing Construction ☑ (Meaning existing home or business)

Name: Matthew Saponaro Email: Mattsap@aiwhoo.com

Mailing Address: 88 Munro Road

City: Newark State: DE Zip Code: 19711

Installation Location (if different from Mailing Address above):

Telephone (Daytime): Area Code 302 Number 494-1952 (Evening) Area Code ____ Number ____

Home/Business Building Age: 2015 Power Account No.: 065-0003254O-02

Section 3. Generator Technical Information

Customer Type: ☑ Residential ☐ Non-Residential ☐ Farm

The purpose of interconnection is to Net Energy Meter ("NEM") ☑ Yes ☐ No
If No, the generator will not be NEM eligible and will be subject to additional tariff requirements.

NEM Applicants Only:

Is Generator under: 25 kW for Residential, 500 kW for Non-Residential, 100 KW for Farm? ☑ Yes ☐ No

Is Generator on a farm and applicant requests a waiver of the 100 kW limit? ☐ Yes ☐ No

Type NEM Qualifying Energy Source: ☑ Solar ☐ Wind ☐ Hydro ☐ Electric Car ____ # ☐ Fuel Cell ☐ Anaerobic digestion of organic material

Any approved interconnections already in service at this location: ☐ Yes ☑ No
If yes use 3B. 3B is for changing: existing systems (expanding/shrinking) or approved but not yet installed systems.

3A. Complete for New Generator Installations Only – See 3B. for Modifications

3A. Generator Equipment and Operation Details (If multiple different products are used please detail each).

Generator Manufacturer:	Q Cell
Generator Model Name:	Q Peak
Generator Model Number:	G5.1 325
Generator Output (kW):	5.525 kW
Inverter Manufacturer:	Solar Edge
Inverter Model Name:	Single Phase Inverter
Inverter Model Number:	SE 5000A-US
Inverter Power Rating (AC Watts):	5000
Number of Inverters:	1
Inverter Efficiency %:	98.3
Intended Inverter Location:	next to Meter
System Rated Output (Total Generator Output x Inverter Efficiency)	5 43
Customer Consumption (2 year average) from Appendix A	6532 > 110% 55
Generator Expected Annual Production (kWh)	7194

If Generator is Photovoltaic include as well:

Module Power Rating (DC @ STC): Should match Generator Output (kW)	325
Number of Modules:	17
Total Solar Output kW (Modules x Power Rating DC @ STC):	5.525
Array Orientation (degrees): Note the size of each array that has different degrees.	221
Array Tilt (degrees): Note the size of each array that has different degrees.	23

Solar Shading Analysis May be Required (Solar Pathfinder or equivalent accepted): Solar Shading analysis should include readings at all four (4) points of each continuous array and one in the center. Shading analysis may be used by the utility in consideration of NEM benefits.

Will a generator disconnect device, accessible to the Municipal Utility, be installed? ☑ Yes ☐ No

If the Generator Owner elects not to install a manual disconnect device accessible to the Municipal Utility, the Generator Owner assumes all risks and consequences when a service meter must be "pulled" to disconnect the generator thereby also interrupting all utility electric service to the Customer site.

Section 4. Generator/Equipment Certification

Generating systems that use inverter technology must be compliant with IEEE *929* and *Underwriters Lab. UL 1741*. Generating systems must be compliant with the Municipality's Power Delivery's Technical Considerations Covering Parallel Operations of Customer Owned Generation. By signing below, the Applicant certifies that the installed generating equipment meets the appropriate preceding requirements and can supply documentation that confirms compliance. The applicant also agrees that if any details about the generator system as detailed in Section 3 change, it is the applicant's sole responsibility to notify the Municipal Utility of those changes by submitting a revised Interconnection Application prior to commencing or completing construction / modification. The applicant agrees to wait to receive approval from the Municipal Utility of any revised Interconnection Application before proceeding with construction. Failure to notify the Municipal Utility in advance of system changes prior to submitting the Final As-Built Details could cause approval delays or denial of interconnection if the revised system is not compliant with NEM and/or Municipal Utility requirements.

Section 5. Net Energy Metering

Net Energy Metering is a service to customers which allows customers to generate electricity for their own needs (from an eligible on-site generating facility) and to deliver excess electric into the municipal electric system and then allows the customer to take electric from the municipal electric system when the customer cannot produce the electric required to sustain their own needs.

The customer sited generating system shall be designed to produce no more than 110% of the initial design load. The initial design load shall be the calculated average of the two previous twelve-month periods of actual electric usage at the time of installation of electric generating equipment. For new building construction, the initial design load will equate to the electric consumption of units of similar size and characteristics at the time of installation of energy generating equipment as determined appropriate by the Municipal Electric Utility.

Section 6. Applicant Signature

I hereby certify that, to the best of my knowledge, all the information provided in this Part I Interconnection Application is true and correct.

Signed (Applicant): Matthew Sponaro Date: 6/25/19

Print name: Matthew Sponaro

Call your municipal electric service to find out who should receive this Part I Interconnection Application. Make sure to include all application sections (1 – 8) and Appendix A with new / modified submissions.

Section 7. Preliminary Generator/Equipment Installment Approval / Rejection

The Municipal Utility: ☑ Approves ☐ Approves w/ conditions ☐ Does NOT Approve

Part I Interconnection Application for a (system type) SOLAR generator as detailed in this application and located at (installation address) 88 Munro Road.

Signed (Municipal Utility): [signature] Date: 6/27/19

Print Name and Title: Sam Salvesinger Assistant Electric Director

Approval with Conditions:

Reason of Not Approving:

Section 8. Internal Notifications

A copy of the approved Application Part 1 must be sent to the Municipal Building Department. Yes ☑

A copy of the approved Application Part I must be sent to the Delaware Municipal Electric Corporation ("DEMEC"). Yes ☑

DEMEC
P.O. Box 310
Smyrna, DE 19977

Appendix A
Customer Consumption and Generator Production

Item 1: Customer Consumption. Customer is to provide for existing construction 2 previous 12-month period(s) of actual electrical usage at the time of installation of energy generating equipment. For new construction provide estimated electrical consumption for units of similar size and characteristics at the time of installation of the energy generation equipment.

Month/Year	Year 1 Consumption (kwh)	Month/Year	Year 2 Consumption (kwh)
5/21/19	596	5/20/18	244
4/20/19	420	4/26/18	309
3/20/19	429	3/20/18	357
2/20/19	514	2/20/18	292
1/20/19	494	1/20/18	410
12/20/18	539	12/20/17	279
11/20/18	413	11/20/17	386
10/20/18	441	10/20/17	492
9/20/18	701	9/20/17	643
8/20/18	938	8/18/17	725
7/20/18	809	7/22/17	1100
6/20/18	436	6/22/17	1197
12 Month Total (kwh)	6630		~~2442~~
2 Year Average (kwh)		6532	99

previous owner

The municipal utility will verify the above consumption numbers. If the customer provided consumption numbers differ from the utility the applicant may need to provide copies of actual electric bills at the request of the utility to support the information provided in Item 1.

Item 2: Generator Production. Customer is required to provide estimated annual production totals for the proposed generator and a calculation method in sufficient detail so the utility can recreate the estimated annual production totals. Calculation totals and method to be attached to Appendix A.

Item 3: (check one)

☑ I certify that I am applying for net energy metering privileges and that Section 3 system is designed to produce no more than 110% of my facility's expected electric consumption, calculated on the average of the 2 previous 12-month period(s) of actual electrical usage at the time of installation of energy generating equipment.

☑ I certify that I am applying for net metering benefits as a new building construction, that the system is being designed for electrical consumption as estimated at 110% of the consumption of units of similar size and characteristics at the time of installation of the energy generation equipment.

I hereby certify that, to the best of my knowledge, all the information provided in Appendix A is true and correct.

Signed (Applicant): Matthew Saponaro Date 6/25/19

Print Name: Matthew Saponaro

Municipality Generator Interconnection Application -Short Form
Part II - Final As-Built Details

A single customer interconnecting to a single meter at a single premise provides Final As-Built Details this date _____ to the Municipality of Newark, to install and operate a generating facility interconnected with the Municipal's utility system.

Section 9. Installation Details

Generating System was installed by: ☐ Owner ☑ State Licensed Electrician

Installing Electrician: Bob Myers Firm: Myers Electric License No.: T2002385L

Mailing Address: P.O. Box 12

City: Newark State: DE Zip Code: 19715

Telephone: Area Code: 302 Number: 547-6914

Installation Completion Date: 7/25/19 Interconnection Date: 8/9/19
(System connected but shall not be active/live. System not approved by Utility at this point.)

Supply certification that the generating system has been installed and inspected in compliance with the local Building/Electrical code of the municipality of Newark, DE.

Signed (Inspector): _____ Date: _____
(In lieu of signature of Inspector, a copy of the final inspection certificate may be attached)

Generator Technical Information

The applicant certifies that the system described below is the Final As-Built Design and **does match any revised application submitted by the applicant and approved by the municipality prior to the interconnection date.**

Generator Equipment and Operation Details (If multiple different products are used please detail)

Generator Manufacturer:	Q.Cell
Generator Model Name:	Q. Peak
Generator Model Number:	G5.1 325
Generator Output (kW):	5.525 kW
Inverter Manufacturer:	Solar Edge
Inverter Model Name:	Single phase Inverter
Inverter Model Number:	SE 5000A-US
Inverter Power Rating (AC Watts):	5000
Number of Inverters:	1

Inverter Efficiency %:	98.3
Intended Inverter Location:	next to Meter
System Rated Output (Total Generator Output x Inverter Efficiency)	5.43
If Generator is Photovoltaic include as well:	
Module Power Rating (DC @ STC): Should match Generator Output (kW)	325
Number of Modules:	17
Total Solar Output kW (Modules x Power Rating DC @ STC):	5.525
Array Orientation (degrees): Note size of each array with different degrees.	221
Array Tilt (degrees): Note size of each array with different degrees.	23
May be Required: Completed Generator Installation Pictures Attached. Must show whole generator, inverters, electric permits	

Section 10. Applicant Certifications

I hereby certify that, to the best of my knowledge, all the information provided in the Final As-Built Details is true and correct. I agree to install a Warning Label provided by the Municipality on or near my service meter location. I also agree to submit a new or revised Interconnection Application and comply with all governing permitting requirements before adding to in any way or subtract from in any way the current approved electric generating system; including but not limited to expanding, replacing, or removing all or a portion of the current system, adding a new generator type, and/or replacing in anyway the generator system inverter. I further agree to notify the utility in writing through official certified mail at least 30 days before I sell or transfer ownership of the system to another owner to allow the municipal electric utility to update records and determine if the new owner agrees to the generation and interconnection responsibilities associated with the transfer of ownership. A new property owner, of property that up until the time of sale had an approved Interconnection Agreement in place for net-metering, has 30 days to submit a new Interconnection Agreement for net-metering in his/her name. If the new owner fails to submit an Interconnection Agreement within 30 days of property transfer, certain net-metering transfer rights may be discontinued.

Failure for non-compliance to these certifications will be considered a violation of the net-metering agreement and may result in the disconnection of the electric generator at the discretion of the municipal electric utility. The sale or transfer of the electric generator shall not compromise law.

I further certify and understand that municipal utility review and approval of this application does not constitute an endorsement of actual equipment performance nor does it endorse its benefits or economics.

Signature of Applicant: Matthew Saponaro 8/9/19

Print Name: Matthew Saponaro

Call your municipal electric service to find out who should receive this Part II Interconnection Application. Make sure to include all application sections (9 – 12) with final submissions.

Section 11. Final Approval or Non-Approval for Interconnection and System Operation

The Municipal Utility: ☑ Approves ☐ Approves w/Conditions ☐ Does NOT Approve

The interconnection of a SOLAR **generator as detailed in the Final As-Built Details and located at (installation address)** 89 Munro Rd.

The Municipal Utility has verified the applicant's average electric consumption in Appendix A. ☑ Yes ☐ No

The Municipal Utility has verified at the time of installation that the installed electric generator is designed to produce no more than 110% of the applicant's/customer's average annual electric consumption as calculated in Appendix A. ☑ Yes ☐ No

Signed (Municipal Utility): Sam Sneeringer **Date:** 8/9/19

Print Name & Title: Sam Sneeringer Deputy Electric Director

Approval with Conditions:

AMERICAN INSPECTION AGENCY, INC.

Approval is issued after completion of visual / final inspection in accordance with the National Electric Code (NFPA 70) applicable governmental, utility, and/or any state or local amendments there to.

CERTIFICATE OF INSPECTION

Date:	August 8, 2019
Owner:	Matthew Saponaro
Occupant:	Dwelling
Location:	88 Munro Road, Newark, DE
Type of Occupancy:	Single Family
Installed By:	KW Solar Solutions
Equipment:	5.525 KW Solar Associated Electric

This certificate applies to the electrical wiring to the electrical equipment listed above and/or on application along with the installation inspected as of the above noted date based on visual inspection. Should the electrical system to which this certificate applies be altered or changed in anyway, including but not limited to the introduction of additional electrical equipment and/or the replacement of the components installed as of the above noted date, this certificate shall be immediately null and void. This certificate applies only to the use, occupancy and ownership as indicated herein. Upon a change in the use, occupancy or ownership of the property indicated above, the certificate shall be immediately null and void. No warranty is expressed or implied as to the mechanical safety. This certificate shall be valid for a period of one year from the above noted date.